Heighten the organizational work in lowering the in eradicating infectious diseases. Zhur.mikrobiol., 32 no.12:3-8 D '61. (COMMUNICABLE DISEASES-PREVENT	epid.1 immun. (MIRA 15:11)

Hature of the temper brittleness of steel. Dokl. AN SSSR 105 no.2:
(MERA 9:3)

1. Institut metallovedeniaya i fiziki metallov TSentral'nogo
nauchno-issledovatel'skogo instituta chernoy metallurgii. Fredstavleno akademikom G.V. Kurdyumovym.
(Steel--Brittleness)

SMAVARELIBZE, LG.

Category : USSR/Solid State Physics - Systems

E-4:

Abs Jour: Ref Zhur - Fizika, No 2, 1957 No 3781

Author : Tavadze, Sakvarelikze

Title : Structure and Certain Properties of Copper-Arsenic Alloys

Orig Pub: Tr. In-ta metalla i gorn. dela AN GruzSSR, 1956, 7, 59-72

Abstract : A technique for smelting an arsenic bronze was developed and a study

was made of the structure and of certain of its properties with an As content up to 10%. The solubility limit of As in Cu was established. The strength and plasite indices increase with increased As content, and the electric resistivity and coefficient of linear shrinkage diminish. The coefficient of expansion does not experience any changes whatever.

Card : 1/1

SAKVARelidze, L.G.

AUTHORS: Sakvarelidze, L.G. and Utevskiy, L.M.

70-5-25/31

TITLE:

On Methods of Investigating the Structures and Phase Compositions of Grain Boundaries (K metodike issledovaniya struktury i fazovogo sostava granits zeren)

FERIODICAL: Kristallografiya, 1957, Vol.2, No.5, pp. 695-699 (USSR)

ABSTRACT: A combined electron-diffraction electron microscope technique for examining material in the boundaries between grains in iron alloys is described. By etching a steel for 1-5 min. in Popov's etch, the matrix material can be removed for a depth of 0.2 - 0.4 μ leaving the less soluble boundary phase standing proud of the surface in ridges. If the electron beam is then inclined to the surface at a glancing angle of 1°, then a satisfactory electron diffraction picture can be obtained even if the boundary material has only 10⁻⁴ to 10⁻² of the total volume of the specimen. For example, cementite, occupying only 0.4% of the specimen volume in 0.05% carbon steel, can be detected. By using the X-ray fluorescent radiation excited the elements present in grain boundaries and they can be detected. Lines of a face-centred cubic phase (a = 3.62 ± 0.01 A) found various low-carbon steels have been attributed to austenite.

70-5-25/31

On Methods of Investigating the Structures and Phase Compositions of Train Boundaries.

The authors have tested, with the above technique, alloys of iron with 0.05% to 2% of Mn, Ni, Cr, Mo and up to 0.01% P, C or Sn after annealing or tempering at 800 °C and found no sign of "austenite". Nor did austenite appear after cementation or nitriding these alloys, but only after the addition of less than 0.1% Cu. The copper layer seems to be deposited on commercial steels while etching is in progress and comes from the iron of technical quality. If the Cu is deposited on the anode, its period is 3.65 A and if on the cathode its period is 3.62 A. A series of chrome-manganese and chrome-nickel steels, some with very low carbon content, and possessing reversible tempering brittleness, were examined. The study confirmed that brittle fricture of steels in the condition of tempering brittleness roceeds along the grain boundaries. This is shown from electron micrographs, the grain boundary particles being shown to be Fe₃C and Cr₇C₃. There are 7 plates and 5 references, 3 of

ASSOCIATION: TSNIICHERMET
SUBMITTED: April, 22, 1957.
AVAILABIE: Library of Congress

SOV/120-58-4-11/30

AUTHORS: Orlov, L. G., Jakvarolidze, L. G., Utevskiy, L. M.

TITE Local X-Ray Analysis by Photographing [Taking spectrogram of] Reflected [X-Rays] (Lokal'nyy rentgenospektral'nyy analiz pri elektronograficheskoy s" yemke "na otrazheniye")

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 4, pp 51-62 (USSR)

ABSTRACT: A method is described for the analysis of the chemical composition of very thin surface layers. Simultaneously with this the structural phase pattern may be obtained "by reflection" in the EM-4 electronograph, using a specially designed spectral camera. The X-ray radiation which appears when an electron beam grazes the surface of the specimen is studied. In electron diffraction studies "by reflection" the diffraction pattern is produced by a surface layer about 10-6 cm thick. The X-ray radiation which results during this process may be used for the X-ray analysis of the chemical composition of the surface of a specimen under investigation. The geometrical conditions in the "by reflection" case (grazing electron beam) make it possible to carry

Card 1/2

30V/120-58-4-11/30

Local X-Ray Analysis by Photographing [Taking Spectrogram of] Reflected [X-Rays] out not only a general but also a local analysis of the structural components of the specimen for various states of its surface. The chamber used for this purpose is shown in Fig.1. The X-ray spectrum is analysed by a fixed calcite crystal. The method has been used to study changes in the chemical composition of surface layers of ferrite and various kinds of steel. There are 2 figures and 9 references, of which 5 are Soviet and 4 English.

ASSOCIATION: Institut metallovedeniya i fiziki metallov TsNIIChermet (Institute of Metallography and Physics of Metals of TsNIIChermet)

SUBMITTED: October 25, 1957.

Card 2/2

SOV/137-58-8-17776

Translation from: Referativnyy zhurnal, Metallurgiya, 1958 Nr 8 p 226 (USSR)

AUTHORS: Orlov, L.G., Sakvarelidze, L.G., Uteyskiy, L.M.

TITLE: A Study of the Surface Layers of Ferrite Grains in Steel (Izurcheniye poverkhnostnykh sloyev zeren ferrita v stali)

PERIODICAL: Sb. tr., In-t metalloved, i fiz. metallov Tsentr. n. i. in-ta chernoy metallurgii, 1958, Vol 5, pp 287-293

ABSTRACT; A presentation of certain data obtained during studies on surface phenomena in Fe alloys and low-carbon steel performed by means of electron diffraction study and electron microscopy. It established that the surface layers of ferrite grains differ from their central regions only with regard to their chemical composition and not in their phase composition. After high tempering or annealing, no austenite interlayers were observed in Fe or in structural steels. Statements made by other researchers to the effect that such layers are present are erroneous and were, apparently, caused by the presence of Cu impurities which produce their own diffraction patterns upon the electron-diffraction picture. T.F. 1. Iron alloys-Surface Card 1/1 properties 2. Steel alloys-Surface properties 3. Grains (Metallurgy)-Analysis 4. Electron diffraction analysis 5. Electron microscopes

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Electron microscopy and electronography of alloys on a base. Trudy Inst.met. AN Gruz. SSR 128167-172 62.	pure iron (MIRA 15:12)
(Iron alloys Metallography) (Electron microscopy)	

L 07806-67 EMT(m)/EMP(t)/ETI IJP(c) ACC NRI AR6017483 SOURCE CODE: UR/0137/66/000/001/V021/V022 AUTHOR: Tavadze, F. N.; Bayramashvili, I. A.; Sakvarelidze, L. G.; Metreveli, V. Sh. Zone refining of iron 7 TITLE: 22 SOURCE: Ref. zh. Metallurgiya, Abs. 1V158 \mathcal{B} REF SOURCE: Tr. Gruz. in-t metallurgii, v. 14, 1965, 123-127 TOPIC TAGS: zone refining, carbonyl iron, metal purification ABSTRACT: Data are given from experiments on zone refining of two iron ingots: the first of Armco iron and the second of carbonyl iron. The first specimen was purified in an argon atmosphere on a copper hearth at a rate of 4 cm/hr. The second was purified at the same rate in a helium atmosphere on a lime hearth. It was found that zone refining may be done successfully on a hearth made from a mixture of calcium and magnesium oxides (5% MgO). Frank-Read sources at all stages of development were observed in the iron. Horizontal zone refining produces perfect crystals of iron including perfect single crystals. Purification results after nine passes on both specimens were as follows (the numerator indicates % in the initial material, the denominator - % after zone refining in the head of the ingot): first specimen Si 0.17/0.002, P 0.007/ 0.003, S 0.028/0.007, C 0.017/0.009, Mn 0.13/0.025, Cu 0.16/0.09. Second specimen Si 0.0001/none, Mn 0.00005/None, Ni 0.02/0.007, C 0.011/0.006. 10 illustrations, 2 tables, bibliography of 5 titles. A. Pokhvisnev. [Translation of abstract] SUB CODE: 11,13 Card 1/1 mc UDC: 660,181,4-492

"APPROVED FOR RELEASE: 09/19/2001 CIA-R

CIA-RDP86-00513R001446820002-4

EMIN(60)/EWP(W)/IN/EWP(E)/FII/EWE(E) $\mathbf{L}(\mathbf{H}^{n}, \mathbf{L})$ SOURCE CODE: UR/0137/66/000/002/I016/I016 ACC NR. AR6020944 AUTHOR: Tavadze, F. N.; Sakvarelidze, L. G.; Zoidze, N. A. Tempering of deformed martensite TITLE: SOURCE: Ref. zh. Metallurg, Abs. 21104 REF SOURCE: Tr. Gruz. in-t metallurgii, v. 14, 1965, 137-144 TOPIC TAGS: plastic deformation, martensite steel / U10 steel, U8 steel, 30 steel TRANSLATION: The influence of plastic deformation on decomposition kinetics after quenching was studied in Ulo, U8, and 30 steels by means of measuring thermal emf and internal friction. A calculation of the degree of decomposition of deformed martensite after low temperature tempering (60-220°C) and the determination of the activation energy showed that the latter amounted to 27 Kcal/mol, just as for general cases of tempering, which implied the invariance of the nature of tempering. For the same degree of decomposition, the speed of decomposition was higher in deformed martensite while the damping of the speed proceeded faster than in the undeformed. It is expected that the increase of strength at room temperature of deformed martensite is associated with the precipitation of a large amount of small particles on dislocations, which are blocked by them, while the maintenance of strength to high temperatures is UDC: 669.14.017.3:669.112.227.34 Card 1/2

3
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SAKVARELIDIE, M. A.

"The Problem of the Psychopathologic Disturbance of the Systematic Activity of the Spinal Cord." Cand Med Sci, Inst of Psychology, Acad Sci Georgian SSR, Tbilisi, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

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SAKVARELIDZE, M.A.; NADIRASHVILI, Sh.A.; MCHEDLISHVILI, G.N.

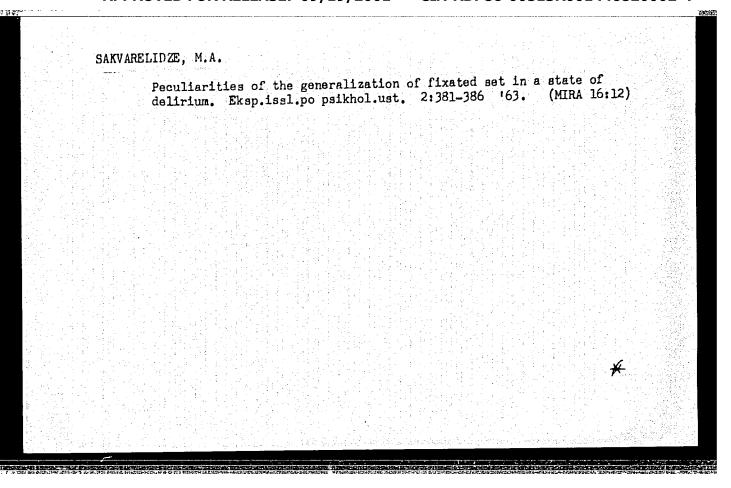
Bibliography of works of the D.N. Uznadze Institute of Psychology of the Academy of Sciences of the Georgian Socialist Soviet Republic.

Trudy Inst.psikhol. AN Gruz. SSR 11:413-451 '57. (MIRA 12:3)

(Georgia--Psychology--Bibliography)

(Bibliography--Georgia--Psychology)

Peculiarities in the generalisation of attitude in delirious states. Trudy Inst. psikhol. AN Grus. SSR 12:135-144 '60. (MIRA 13:11) (Attitude (Psychology))	



	Living through AN Gruz.SSR 14:	the meaning of the 163-173 '63.	e delirium. Tru	dy Inst.psikhol. (MIRA 18:4)	
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[In Georgian]	Tbilisi, Metsniereba	[Materialy] 1965. 91 p. (MIRA 18:10)
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Pecularities of fixated set in diseases of the frontal lobes. Exsp. issl. po psikhol. ust. 1:569-581 *58. (MIRA 13:12) (Attitude (Psychology)) (Brain-Diseases) (Hallucinations and illusions)

SAKVARE LICIZE P.V.

USSR/General Problems. Methodology. History. Scientific A

Institutions and Conferences. Instruction. Questions Concerning Bibliography.and Scien-

tific Documentation

Abs Jour : Ref Zhur-Khimiya, No 3, 1958, 6841

Author : P. V. Sakvarelidze Inst

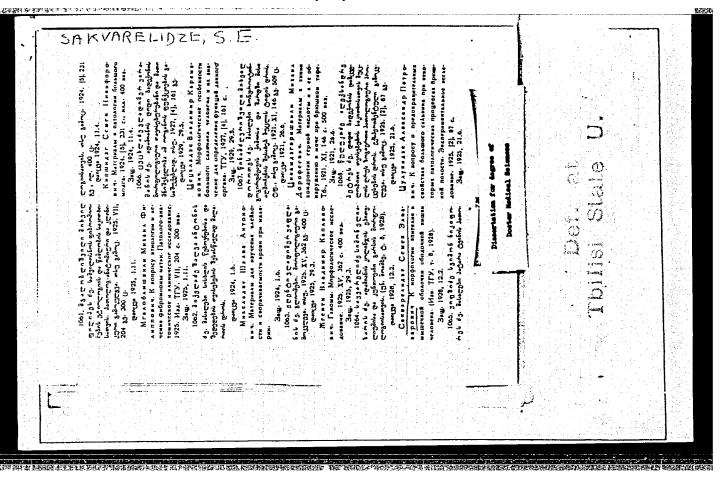
Title : Canned Food Industry of Georgia

Orig Pub : Konservn. i ovoshchsush. prom-st', 1957, No 10,

31--32

Abstract : A sketch of development.

Card 1/1



SAKVARRLIDZE, S. E.

22655 Sakvarelidze, S. E. Izmeneniye Soderzhaniya Zhira Pri Golodanii
V Nadpochechnike, Pecheni, Semennike I yalchnike Krolika, Trudy (Tbilis.
Gos. Med. In-T), T. V. 1948, S. 31-38----NA Gruz. Yaz. -- Resyume NA
Rus. Yaz.----Bibliogr: S. 36

So: Letopia¹, No. 30, 1949

[Histology] [Gistologiia. Tbilisi, Gos.izd-vo "TSodna"] Pt.2. 1963. 246 p. [In Georgian] (MIRA 17:4)	IDZE, Semen Eliazarovich			
	[Histology] [Gistologi: Pt.2. 1963. 246 p. []	la. Tbilisi, ^G os.izd- In Georgian]	vo "TSodna"] (MIRA 17:4)	
보이면 하시다. 그런 말로 문화되는 함께 다른 말로 발표하다. 라스트 방문이 하는 글로 말로 하는 말로 모르는데 있는 것을 하는 것 같습니다. 생활하게 하는 방문 기자들이 유통을 만들어 말을 하는 데 보고를 하는 것을 하는데 그를 하는 것을 하는데 하는 것을 하는데 되었다.				

SAKVARELIDZE, S. V., Candidate Med Sci (diss) -- "Intermediate medical training in Georgia". Tbilisi, 1959. 24 pp (Tbilisi State Med Inst), 200 copies (KL, No. 24, 1959, 152)

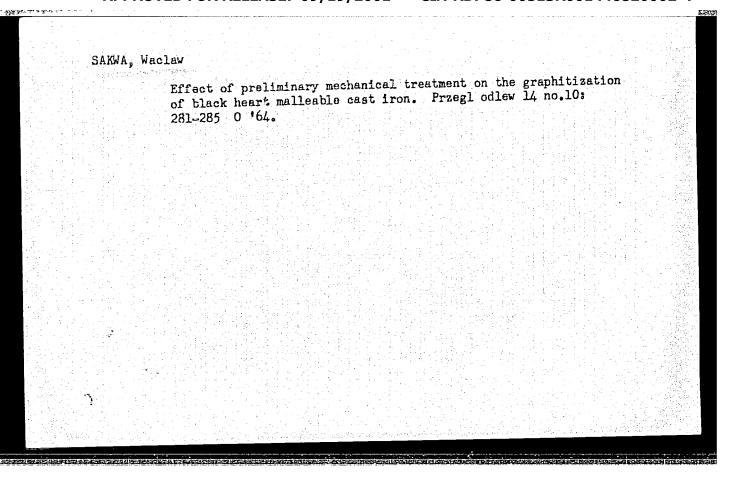
TAVADZE, F. N.; SAKVARELIDZE, T. N.; ABESADZE, TS. N.; DVALI, T. A.

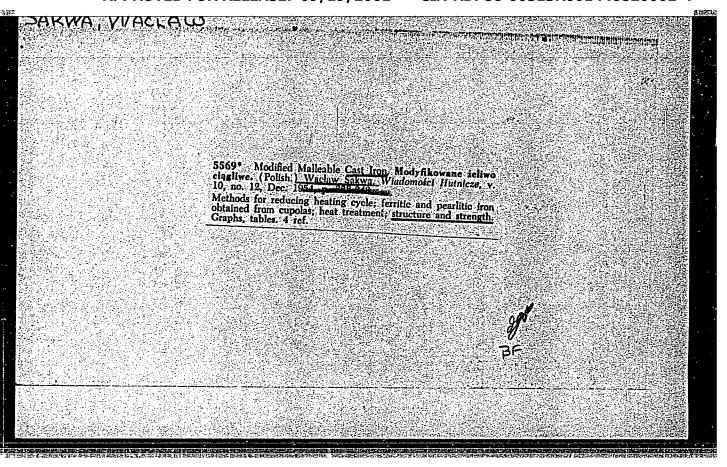
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(Georgia—Wrought iron)

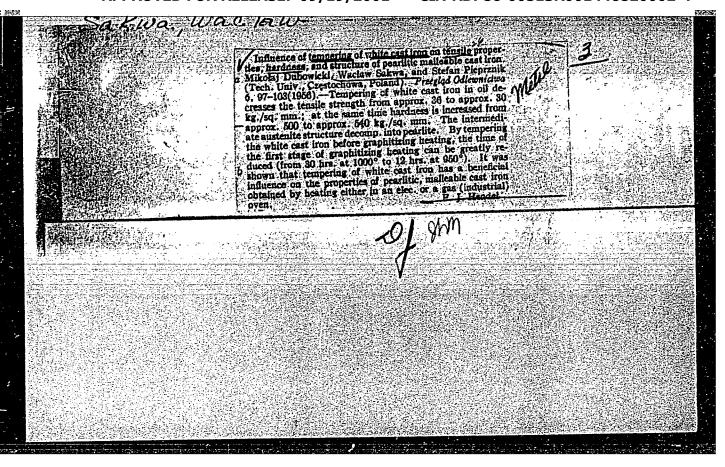
SAKVARELIDZE, V.I.

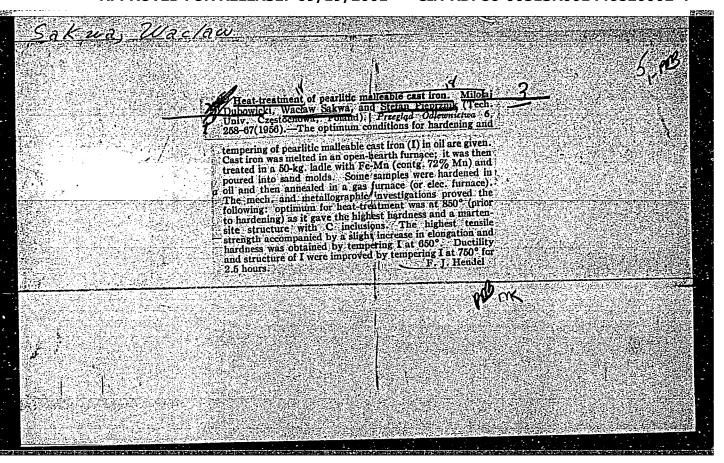
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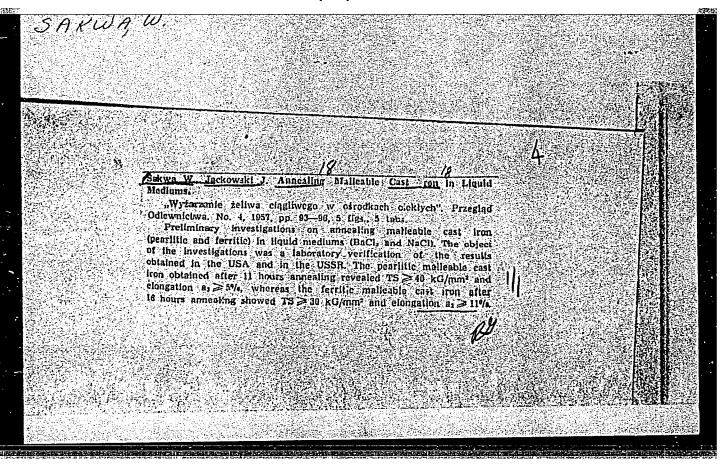
1. Iz Tbilisskoy respublikanskoy stomatologicheskoy polikliniki (glavnyy vrach V.I.Sakvarelidze) Ministerstva zdravookhraneniya Gruzinskoy SSR. (GEORGIA-STOMATOLOGY)

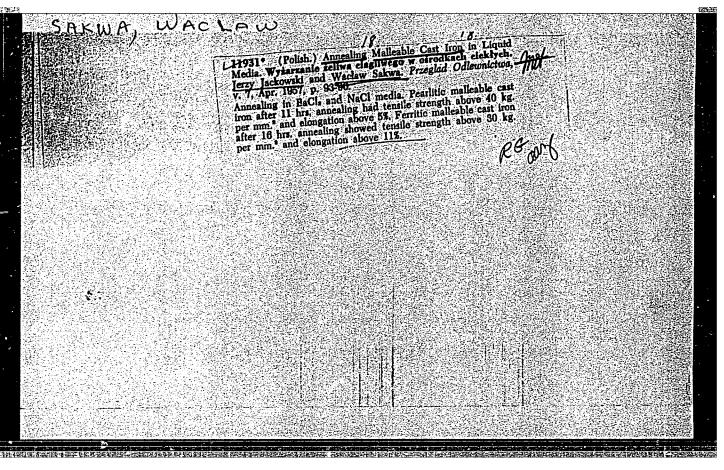


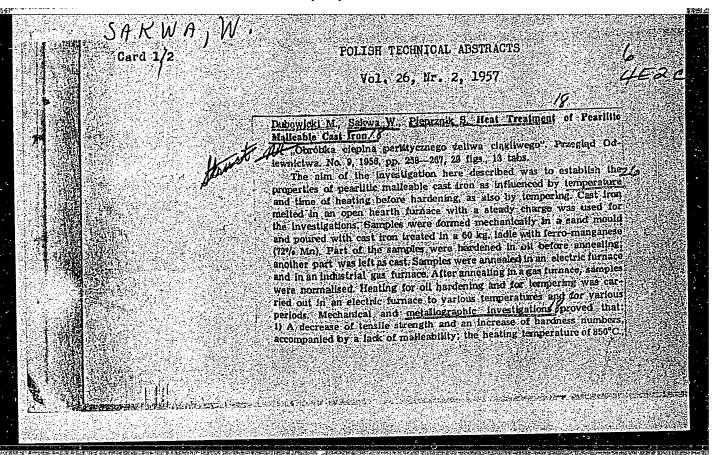


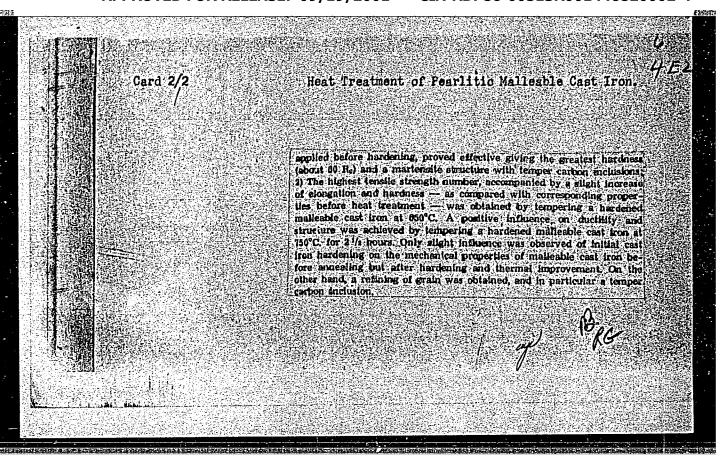






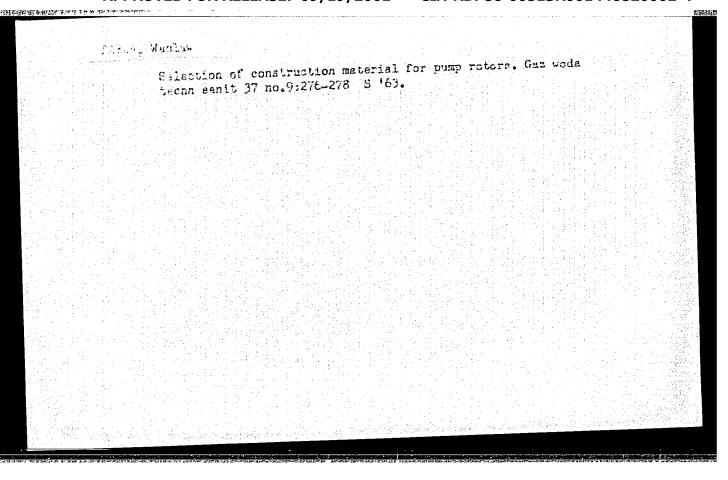






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SAKYAK, I. I.

"Braking Properties of Induction Motors in the Case of Asymmetrical Stator Winding Connections." Cand Tech Sci, L'vov, Polytechnic Inst, Min Higher Education USSE, L'vov, 1954. (KL, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

Baltana - same		
KORSHAK	V.V.; PETROV, A.D.; MATVEYEVA, N.G.; MIRONOV, V.F.; NIKITIN, SAKYKH-ZADE, S.I. High molecular weight compounds. Part 97. Polymerization and copolymerization of certain silicon olefins. Zhur.ob.khim. 26 no.4:1209-1212 Ap 156.	
	1. Institut elementoorganicheskikh soyedineniy akademii nauk SSSR. (Silane) (Polymers and polymerization)	
	그렇게 노름을 되었습니 한국은 남자들이 가장 말이라고 보니 아름이 많다.	
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SAKYN', A. V.; MILLER, S. V. BESSONOVA, A. P; ELUSHKOV, L. A.; GORLANOVA, N.A.; GOTLIB, YE. V.; STONIN-FAKHUREV, I. M.; FILATOVA, A. S.; SURIS, V. G.; GRUKUS, G. D.

"Sanitary labor conditions in the electrolytic shops of aluminum plants and the essential health-protection measures."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

POPOVA, Q.S.; SAKZHAROVSKIY, A.T.

Effect of cathode-reduced hydrogen on the properties of metals.
Dokl. AN SSSR 136 no. 2:654-656 Ja '61.

1. Institut fizicheskoy khimii AN SSSR. Predstayleno akademikom
P.A. Rebinderom.

(Hydrogen) (Metals—Hydrogen content)

"Approximate Calculation of the range of Average
Temperature Alterations in Bodies with Volumetric
Inner Sources of Periodically Emitting Heat."

Report submitted for the Conference on Heat and Mass
Transfer, Minsk, BSSR, June 1961.

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Sala, A.; BURANCWSEI, T.

Airplanes, missiles. p. 37.

Bushow Pres Lad Lowison. (Downdate Wojsk Lotnicznych) Marszara, Poland.

Vol. 11, no. 9, Sept. 1958.

Ponthly list of East European Accessions (EBAI) LC, Vol. 8, no. 7, July 1959.

Buel.
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19(2)

POL/44-59-10-8/20

AUTHORS:

Burakowski, T., and Sala, A., Master Engineers

TITLE:

Rockets and Anti Aircraft Defense

PERIODICAL:

Wojskowy przegląd lotniczy, 1959, Nr 10, pp 39-53 (POLAND)

ABSTRACT:

Practically, there are no weapons available at present to sucessfully defend a certain object from long range ballistic rockets. A remote controlled anti-missile would be such a weapon, but development of such a projectile is so complicated that nothing useful has been accomplished by any country so far. An anti-mispile would have to be a step-missile, equipped with a rocket drive propulsion in its first step permitting a speed of above 1,000 m/sec within a short time after take-off. Liquid fuel will be apsion; moreover, at high altitudes with low density of atmosphere it would have to adjust the course of flight toc. As the attackeach other at very high speeds (approximately 10,000 m/sec), the possibility of hitting the ballistic rocket is almost impossible,

Card 1/3

POL/44-59-10-8/20

Rockets and Anti Aircraft Defense

as minor errors in guidance would mean position deviations up to 300 m (according to the latest stage of development of remote control). It will, therefore, be necessary to install an additional third step in the missile to self-guide the projectile to the target. The application of infra red rays for this purpose seems to be the best means for this self-guiding, especially considering the fact that high temperatures will prevail on the front part of the flying projectile. Diagram 28 shows the three steps of an anti-missile as projected. The application of an atomic blast in order to destroy the enemy rocket does not seem to be practical, as the material of the ballistic rocket would withstand the created heat and the radioactivity, and to attain a maximum force of explosion, an nuclear load equal to 20,000 tons of TNT would be necessary to provide a sure success within a distance of 300 m. Classical explosives will do it better, being much cheaper. Diagram 29 demonstrates six various types of possible anti-missiles. In all six instances it was supposed that the weight of the third missile-step would be 1% of the total weight of the projectile,

Card 2/3

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Rockets and Anti Aircraft Defense

that the propulsion efficiency would be 500 kg sec/kg, and that the final speed of the missile would reach 6,000 m/sec. There are 10 diagrams, 1 table and 3 Polish references

Card 3/3

SALA, A. ; BURAKCHEKI, T.

Invercentinental ballistic missiles. (To be contd.) p. 30

WOJSKOWY PRZEGIMD LOTHICZY. (Dowedztwo Wejsk Lotnicznych) Warszawa, Poland Wel. 12, no. h, Apr. 1959

Monthly List of East European Accessions (EEAI) IC Vol. 8, no. 8, August, 1959

Encl.

SALA, A.; BURAKOWSKI, T.

Intercontinental ballistic missiles. (To be contd.) p. 38.

WOJSKOWY PRZECHAD LOTNICZY. (Dowodztwo Wojsk Lotnicznych) Warszawa, Poland, Vol. 12, no. 5, May 1959

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 8, August, 1959

Uncl.

P/044/60/008/004/007/012

AUTHORS: Burakowski, T.; Sala, A.; Masters of Graduate Engineering

TITLE: Air to Air Rockets and Guided Missiles

PERIODICAL: Wojskowy Przeglad Lotniczy, 1960, Vol. 8, No. 4, pp. 53 - 63

TEXT: The efficiency of air raid defense by rockets and guided missiles launched from fighters in comparison with a surface to air defense is analyzed. The merits and demerits of both systems are listed (Table 1). An article by H.H. Porter published on pages 24-29 of the July 1953 issue of the Aeronautical Engineering Review is mentioned. The armament of several Western fighters is described and that of the Svedish SAAB-32A fighter shown (Photograph 1). The number of gun-equipped and rocket-equipped fighters needed for destruction of an attacking force of 50 bombers is graphically shown (Diagrams 2 and 3). It amounts to 700 and 400 respectively, while only 80 fighters equipped with guided missiles would achieve the same effect. Ways of attack with rocket-equipped fighters are discussed and shown (Diagram 4). The difference in distance of attack with unguided and guided missiles is shown (Diagram 5). There are 4 diagrams, 1 photograph and 1 table.

Card 1/1

2(10),26(5)

POL/5-60-10-10/41

AUTHOR:

Burakowski, T., Master of Engineering

Sala, A., Master of Engineering

TITLE:

Air Breathing <u>Missiles</u> With Uniflow Engines, Types of Propulsion of Guided and Non-Guided Air Breathing

Missiles

PERIODICAL:

Przeglad Techniczny, 1960, Nr 10, pp 17-20

ABSTRACT:

This is a supplement to the article titled "Technika Rakietowa we Wspólczesnym Uzbrojeniu" (Rocket Engineering in Contemporary Armament) published in the Polish periodical "Przeglad Techniczny", Nr 8,9, and 10 1959. This article deals with uniflow and rocket engine missiles. The authors describe in general terms the types of propulsion in guided and non-guided missiles. The classification of rocket and uniflow engines is shown in 2 figures. The authors distinguish solid, solid-liquid and liquid fuel rocket engines, whereat

Card 1/2

P/044/60/000/010/001/002 A105/A126

AUTHORS: Burakowski, I. and Sala, A., Masters of Engineering

TITLE: Rockets, bombs and guided air-to-surface weapons

PERIODICAL: Wojskowy Przegląd Lotniczy, no. 10, 1960, 51 - 62

TEXT: The authors give a historical review of the development of air-to-surface weapons and their use during World War II and describe some of them. The authors conclude with the statement that rockets are more advantageous than bombs tecause of their long range, speed and aiming accuracy. There are 7 figures.

Card 1/1

BURAKCWSKI, T., mgr.,inz.; SALA, A., mgr.,inz.

Rockets, bombs and guided missiles, clars air-earth. (To be contd). Wojsk przegl 13 no.10:51-62 0 '60.

BURAKOWSKI, T., mgr.,inz.; SALA, A., mgr.,inz.

Rockets, bombs and guided missiles, class air - earth.(To be contd.).Wojsk przegl 13 no.11:33-47 N 160.

WSKI, Tadeusz, mgr.,inz.; SALA, A		
Propulsion of guided and non uniflow engines. Przegl techn 3	eguided jet missiles with in no.10:17-20 '60.	
	물리를 살다고는 물로 받아본다.	
	절의 전 나는 물을 모인을 보고했다.	
필로림(물로) 전기물론은 전투시회, 날인	로마 발표를 불통하는데 불러 있었다.	
그런 남편 회사가 많은 성격 전혀		

BURAKCWSKI, T., mgr.,inz; SALA, A., mgr.,inz.

Missiles complementing military rockets, techn 81 no.11:19-22

Mr '60.

BURAKOWSKI, T., mgr.,inz.; SALA, A., mgr.inz.

Special types of missiles with uniflow engines. Przegl techn 81 no.12: 15-20 Mr '60.

	"octovision or seeing in the dark. Horyz techn no.6:11-13. 162.
	트리뷰 하는 한 이 시간에 나를 보고 있다. 본 시원 그리고 그는 항상 본 원이라고 말하고 있다. 한 시설됐
palan in the H	선사는 하는 물리는 어머니의 후속 보고하는 이 지방 때문에 가는 다른 사람이 되었다. 그 모든 그래요 생활을
	가는 경험 전에 가는 하는데 일반 회사는 전환 보이지는 말라면 말라고 하다면 하는데 소리되었다면 되다는데 병원되었다.
	수는 그런 하다 하는 한 경우 현재를 하고 통에 없다. 그를 하는 하는 하는 사람들이 받을 때문이다고 한다면 하다면 하셨습니?
이익 소설을 하셨	[10] 그리지는 아이들이 이 살고 있는데데 하는 일이 나라 하는데 그리는 그리는 그리는 이 살고 있다면 하는데 없다.
	한 병교는 일본의 문제와 발전 영향의 사람들들의 얼마가 없었다. 사람이 가입하다 생태를 되었다고 하는데 하는데 하다 하다.
	고장보면 있다. 한 회장 후 기를 모든 기를 받을 수 있는 기를 하고 있다. 그 것이 되었다는 것이 하는 것이 되었다.
	크기 교회의 문으로 학교의 호텔 본트 수있었던데, 기회 기계 전환 보기 선생기학 기계에 발표가 당첨된 모든 시설 소설
	옷을 되어 무료한 작물에 들어보면 날짜의 보다면 하지만 되어 하고를 돌아가면서 그리고 모금 때 살폈다.
	날이 나는 아이들 회에 그릇 마음 보이 들어 가입을 살아 보여 하다면 하는 것으로 하려면 만들었다면데 하다셔요.
	실어하다. 그의 불의 전에 가장됐다면 하면 하면 없는데 하네요? 그는 사람들은 사고 하다면 하다 하는데
	열리 회의 여러 살아왔다. 학생 작물에 취취한 모습니다 회원 시원 등원 장말리하를 보고 있다. 인터트 등학, 회사 전 생활
	그런 외소에 가는 가득됐는 무슨 회사들을 되었는데, 그리는 상황을 하지만 호텔을 받는 것들을 받는데 한다는 모양했다.
	원조 보고를 보고 통한 일본 학생들을 한다면 말했다. 하고 노전, 전한 경험 원호 전 학교를 보고 살을 되고 있다면 한다. 생활회
	한 신소는 본 레스트 강경 교실적으로 한글에서 시작하다면 하는 것은 하는 다른 하고싶었다는 붉은 또 하는 사람
	하기 이번 한 원리 연극되는 회 문학리를 대한 가득하는 것이 그를 보면했다. 하는 문학을 하고 한 문학을 보고 못했다.
	한 이 것인다는 그는 경기에 소리를 함께 하는 사람이 그리면 보고 있으면 하는 것이 그 사람들이 다른 결과를 가는 하고 생생했다.
	보고 보다 한 학교 학교 학교 학생들은 한 문학으로 하고 하는 학교를 하는 다양한 학교를 하는 다양을 하는 사람들이 되었다.
	이 하다는 그는 나는 아름다는 집에 얼마를 되고 있다는 것이 아니는 그리고 있다는 것이 모든 모든 것이 되어 보냈다.
	그리다는 생기가 말라고 살 있는 경로를 받았다고 한다고 하는 경로 있는 사람들은 하는데 가는 사람이 하는데 저를 통했다.
	그는 보통을 하는 만든 당근 이 그리고를 하고 있는데 하고 있는데 하는데 다른 그는 모든 그리고 있는데 하는데 그래요? [####################################
	어디트 등 하는데 보다는 것이 들어들어 하는 여러지기 하나 되는데 그리는데 날아지고 있다는데 그리다는 깨끗했다.
1.14.14 1.14.15	는 마련 회의 사람들 보는 것 같아. 그런 시험은 중에는 하는 이 나는 하는데 하다면 하는 나는 이 중에 가장 살아왔다.
	지 선수 다음과 블로토토 소문 소문을 받는 데 보기에 가입하다면서 되어도 그 그는 눈이 되었다. 노문함(熱學學)
	그는 이 시간 학생이 함께 보고 하실수 그 날아 사람이 나가 하는데 하는데 사람이 되었다. 이 없이 한 英雄雄雄
	중 하는 어느 아니는 아니는 아니라의 나는 아내는 나는 나를 내려왔다. 그 아니는 아니는 아니는 사람들은 아니는 사람들은 아니는 이 사람들은 아니는 이 사람들은 아니는 아니는 아니는 아니는 아니는 사람들은 아니는

P/044/63/000/001/002/002 E192/E382

Burakows.i, T. and Sala, A., Master Engineers AUTHORS:

Control of rocket missiles TITLE:

Wojskowy przegląd lotniczy, no. 1, 1963, 34 - 48 PERIODICAL:

The known control systems of rocket missiles are based on the following three methods: homing; programmed control and remote control. The homing can be either passive, semiactive or active; in the first case, the control is effected by using the natural radiation of the object pursued; in the second case, the object is irradiated by a transmitter situated outside the missile, while the third variation relies on the reflection of the waves from the object, which are sent by the missile itself. The programmed control includes the following systems: automatic; astronavigational; radio-astronavigational; radionavigational; inertial; gravitational and topographic. Automatic control relies on determining and correcting deviations from a prescribed flight path. This is a comparatively early type of control and was used originally in V-1 and V-2 German rockets. Astronavigational control depends on determining the position of the missile with

Control of rocket missiles

P/044/63/000/001/002/002 E192/E382

respect to some brighter stars. The radio-astronavigational method relies on evaluating the position of the missile with respect to some fixed stars but it employs radio waves emitted by these stars. Radionavigational control depends on a number of fixed stations transmitting pulses or continuous waves; a hyperbolic grid is used for this purpose. Inertial systems rely on the continuous measurement of acceleration of the missile along two or three of its axes by means of inertia-less accelerometers. In the gravitational method use is made of measuring the angle between the vertical and a certain reference plane. The topographic method relies on continuously comparing (by electronic means) the relief of the terrain over which the missile is flying with a previously prepared radar map of the region. The atticle is to be continued. There are 10 figures.

Card 2/2

P/044/63/000/002/001/005 E202/E192

AUTHORS: Burakowski, T., Engineer, and Sala, A., Engineer

TITLE: Guidance of rocket missiles

PERIODICAL: Woksjowy przegląd lotniczy, no.2, 1963, 36-47

TEXT: This paper completes a series of articles dealing with interceptor systems. It is a popular review of the methods of surface-to-air guidance and the historical development of the methods used in homing a missile on a target. Fundamental design of the interceptor system employing the units determining the position of the moving target, the position of the intercepting missile, the transmitter in contact with the missile and the evaluating unit are briefly described. Various methods of control by means of optical command, beam-riding guidance, track-command system and semi-active radar are briefly described. Some details of the beam-riding method are given in which the position of the missile is measured in terms of its distance from the geometrical axis of the transmitting radome. Various missiles, including the American Sparrow I and Terrier, Swiss Oerlikon and British Sea-Slug,

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Guidance of rocket missiles

P/044/63/000/002/001/005 E202/E192

working on the principle of beam-riding, are briefly discussed, together with typical semi-active radar and homing methods. The four basic phases of guidance, namely, the starting, calibrating, fundamental and final phases, are also described. The article concludes with a brief discussion of the steering systems of the basic supersonic missile types.

There are 7 figures.

Card 2/2

EWT(d)/EWT(1)/FS(b)/FBD/BDS/EED-2/EEO-2/ES(t)-2 ASD/AFMDC/ESD-3/APGC/SSD Pg-4/Pk-4/P1-4/Pn-4/ P/044/63/000/005/001/002 L 13218-63 BC/CC/IJP(C) Po-4/Pq-4 Burakowski, T., Master of Engineering AUTHOR: Sala, A., Master of Engineering

Missile self-guidance based on seeking the infrared of TITLE:

Wojskowy Przeglad Lotniczy, v. 17, no. 5, 1963, 22-36 PERIODICAL:

When an airplane flies at a speed of 0.8 Mach at 10,000 meters altitude, the temperature of its walls reaches 250°K. At three times TEXT: the speed, the temperature doubles and the amount of emitted infrared energy increases 16 times, while the intensity of radiation increases 32 times in the wavelength of maximum emission. This means, that theoretically a plane can be detected from a much greater distance as its velocity increases. The actual range is somewhat shorter depending on absorption in the atmosphere and on the sensitivity of the detecting apparatus. These phenomena are utilized in missile guidance with infrared, radar or acoustic waves. The self-guidance system can be: 1) active, if the transmitter of the detection waves is installed in the missile; 2) semi-active, if this transmitter is located outside the missile; in both cases the waves reflected from the target are picked up by the receiver Card 1/7

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installed in the missile. 3) The self-guidance system can also be passive, if the target itself acts as transmitter and the missile has a receiver only. In guidance systems based on seeking the infrared the target and the direction of its motion are detected by thermal range finders. Determining the actual position of the target and leading the missile into collision with it is done by the nose cone of the missile. Its operation is coordinated with the functions of several other components of guidance system: the missile's own position must be determined, then both sets of data, target and missile, are fed into a computer and from there into a signal generating circuit. The signal actuates a servomechanism which in turn steers the motion of the missile. The guidance of missiles is enormously complicated by the fact that the target too is in motion. Thus, the missile must be steered along a curved path which at every point is tangent to the straight line between missile and target. There are many disadvantages to curvilinear motion, nam ly: 1) large inertial forces and lateral accelerations require stronger and heavier missile structure, 2) longer travel distance and travel time - more powerful engines and driving gear. In order to minimize these difficulties, the Card 2/7

L 13218-63 Missile self-guidance... P/044/63/000/005/001/002

guidance system is devised so, that the missile course approximates a straight line. Depending on the speed and the direction of the target, the missile course is continually adjusted to maintain a constant angle of approach. In effect, the missile anticipates the point of collision and veers toward it. The only difference between infrared and other types of sensing is in the method of determining the line of vision, i.e. the straight line between missile and target. With infrared, like with thermal range finding, the detection and guidance apparatus is located in the nose cone of the missile. The simplest, classical such device is the "Hamburg" nose cone which has a photoelectric infrared detector placed in the focus of a parabolic mirror. A coordinating disc between the mirror and the detector is mounted on a common shaft with a commutator. During every one revolution of this entire armature, a set of relays is actuated in four steps and, through a series of circuits, the position of the horizontal and vertical controls is established. The problems of infrared technique can be classified into those of external and those of internal character. The first type of problems consists in discriminating between radiation coming from the target and that coming from other sources, like the sun during the day, or the moon during the night,

Card 3/7

L 13216-63 Missile self-guidance... P/044/63/000/005/001/002

radiation dispersed in the atmosphere, or reflected by clouds. All this so called noise must be minimized at the detecting receiver. The problem is solved by means of slits in the coordinator or preferably a separate grid which modulates only those waves which are emitted or reflected by the target. This is so, because the image of the target formed by the concave parabolic mirror is smaller than the spertures in the grid. This grid is located in the focal plane of the mirror and is made to move in a certain way in order to produce modulations. Radiation from objects whose images are larger than openings in the grid, such as coming from clouds for instance, will pass through the grid unmodulated and can be eliminated subsequently by means of isolation transformers. The second type of problems has to do with the construction of the nose cone and the fact that the missile is moving in the atmosphere. This requires a shield in the shape of a cone, pyramid or hemisphere with maximum transparency and minimum refraction. The detectors, also located at the focus of the mirror, are equipped with amplifiers each, or with one common amplifier, or with a vidicon. However, the infrared rays pass through a lens first which corrects for the spherical aberration of the mirror.

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L 13218-63

Missile self-guidance...

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The Germans were among the first to develop infrared-seeking guided missiles during World War II. However, such nose cone designs as "Hamburg" (10 kilograms weight, 3 kilometers range) or "Madrid" (about 5 kilograms weight, 2-3 kilometers range) have not found combat application. After the war, work on missile development has been done in Soviet Russia, the United States, Great Britain and France, recently also in Italy and in Switzerland. Missiles are for use in combat against manned or unmanned aircraft and ballistic rockets. They fall into three categories: 1) air-to-air, 2) ground-to-air, and 3) water-to-air. One of the earliest water-to-air missiles based on the infrared type of self-guidance was the "Lark" developed in the United States for seaborne anti-aircraft duty. Since 1951 however, it has become obsolete and it is now retired from service. The modern ground-to-air and water-to-air missiles are either self-guided or remote-guided; the latter method is not always feasible or adequate for the required accuracy. For example, remote guidance is quite powerless, if the enemy plane flies at low altitude; because of the earth curvature such target can be detected by radar from a small distance only. On the other extreme, when enemy planes fly at very high altitudes, the error inherent in remote -guidance, being proportional to the distance, renders this method useless. In such case, the combined remote- and self-guidance Card 5/7

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system is used: the first stage of the flight after firing is conducted by remote-guidance; then, when approaching the target, the mission is completed by self-guidance. With this arrangement the accuracy of guidance is made independent of the distance between missile and control station. The missile for combatting ballistic rockets is similar in structure to the anti-aircraft missile, but has more power, longer range and greater speed; it belongs to the ground-to-air category. Air-to-air missiles are now predominantly self-guided and the infrared-seeking method is the most frequently used. Fighter planes are a good example of their application: the missile nose cones operate throughout the duration of the airplane's flight, continuously scanning the area assigned to them; then, as soon as a source of infrared radiation is detected, the pilot receives this information automatically. The missile, fired by the release of a push-button, will hit the target through self-guidance, thus relieving the crew of the job of guiding it by remote control. Such air-to-air self-guided missiles, built after World War II, are in the possession of the Soviet Union, the United States ("Sidewinder", "Falcon" in a few versions), Great Britain ("Firestreak"), France ("Matra M-510") and

Card 6/7

L 13218-63 Missile self-guidance... P/044/63/000/005/001/002

Italy ("C-7"). Certain ground or seaborne targets, like smoking chimneys, also emit infrared radiation which makes their bombardment by the infrared-seeking method possible. The American "Feli" and "Daw" propellerless bombs were designed for anti-submarine combat. This method does not, however, appear suitable for missiles of the ground-to-ground category, except for short-range combat duty against tanks and other armored vehicles. The American "Navaho" was of this type, but it could be guided only during the very last stage of the long distance flight and it was consequently discontinued. In the future, infrared-seeking self-guidance will probably be used in air-to-ground combat and over cosmic-space distances. The reliability of present infrared-seeking self-guided missiles varies from 70% to 90% or less under severe atmospheric conditions. It must be understood here, that the effectiveness of the missile is not necessarily contingent upon its hitting the target; complete or at least partial destruction of the target may be accomplished by an explosion in its vicinity. There are seven schematic diagrams and three pictures in the text. Eight

There are seven schematic diagrams and three pictures in the text. Eight bibliographic references are listed: three Polish (1,3,8), one French (2), three Russian (4,5,7) and one American (6).

Card 7/7

Temperature radiation.	measurements based on the emission of infrared Przegl mech 23 no. 3:74-78 10 F 64.	
1. Instytu	t Mechaniki Precyzyjnej, Warszawa.	
	그렇게 불말도 이 들인 생기가 되는 그렇게 살이 말고 그 일 때를 달	
	엄마하셨다. 그리다 하는 사람들은 사람들은 사람들은 사람들은 사람들이 되었다.	
	프로트웨터 마음을 보고 하는 사람들은 그 사람들은 사람들은 아들들은	
흥스 회사이 경영공	지점(환경) 불러 너무불러지다. 발생님의 관련 글로 다 살면 되면 먹다.	
	사람들 물리는 그리를 하는 것 같아 나는 있는데, 이 사람들이 모르는데	
	마지 않는 병을 들었다. 한 일본 등 보면 경기는 그를 보고 있다. 아들은 말했다.	
	(PROP) : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1] : [1	
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	대통통통하다 마음악의 연합을 가면 말라일만 하는 그리고 되었는데, 그	
	경향이 유럽하는 항공상이를 통할 때문을 살을 고려면 하는 모모와 다시 그 그래?	
	한경을 통문을 보통하는 가는 이 목욕에 하고도 하는 것을 하고 있다.	
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P/0044/64/000/005/0066/0074

ACCESSION NR: AP4039352

AUTHOR: Sala, A. (Master engineer); Przygodzki, S. (Engineer)

TITLE: Proximity fuses

SOURCE: Wojskowy przeglad lotniczy, no. 5, 1964, 66-74

TOPIC TAGS: ammunition fuse, ordnance, materiel, munitions ammunition, missile, rocket, antiOaircraft artillery, ack-ack, infrared detection, infrared proximity fuse, aptical proximity fuse, electrostatic proximity fuse, acoustic proximity fuse, magnetic proximity fuse

ABSTRACT: The article describes some of the modern fuses which are used to detonate projectiles and bombs. Passive IR fuses are being used exclusively today. IR projectiles and bombs. Passive IR fuses are being used exclusively today. IR proximity fuses have the advantage over other types of proximity fuses in that their operation is practically foolproof. These fuses can be utilized to a large extent against targets emitting intense IR rays. This type of target will primarily be against targets emitting intense IR rays. This fuse is adaptable for use in ground-to-aircraft and missiles. This means that this fuse is adaptable for use in ground-to-air, water-to-air, air-to-air missiles as well as in anti-missile missiles. They air, water-to-air, air-to-air missiles as well as in anti-missile missiles. They can also be used in medium and heavy AA fire. The optical fuse can be either active or passive. This type of fuse has not been extensively used because its use is

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ACCESSION NR: AP4039352

greatly dependent not only on light conditions but also upon atmospheric conditions. Electrostatic fuses are noted for their simple construction. Their defect is short operating range which, for all practical purposes, cannot be increased. Increasing the sensitivity will cause a premature setting-off on account of the nonuniform distribution of the electrical charges in the atmosphere. In addition, atmospheric conditions such as rain and fog have a deleterious effect on the operation of electrostatic fuses. The Germans developed a semi-active magnetic proximity fuse around 1930. An active magnetic fuse, creating its own magnetic field and functioning as the result of changes in this field caused by foreign bodies, is also feasible. The operation of this type of fuse is not dependent upon atmospheric conditions. In spite of this, the magnetic fuse has a number of drawbacks such as the complicated utilization of magnetic phenomena in practice. The acoustic fuse functions under the effect of noises created by a moving target. These came into existence during WWII. The acoustic fuse can presently fulfill a very limited role in knocking out airborne targets. This is due to the fact that aircraft and rockets are beginning to travel faster than sound. Under these conditions, the operation of the passive acoustic fuse depends upon the position of the fuse with respect to the target. If the fuse is before the target travelling at supersonic speed, it will generally not function. If it is off of the target, it will be actuated even at a long range. A further development of proximity fuses is largely dependent

ACCESSION NR: AP4039352

upon three basic factors: (1) the design of improved and modern electronic elements; (2) research into the physical characteristics of potential targets and construction of effective detectors on the basis of this research; (3) utilization of other physical phenomena for the design of new types of proximity fuses, which may include pressure-activitated and atomic radiation fuses. Orig. art. has: 5 figures.

ASSOCIATION: none

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DATE ACQ: 12Jun64

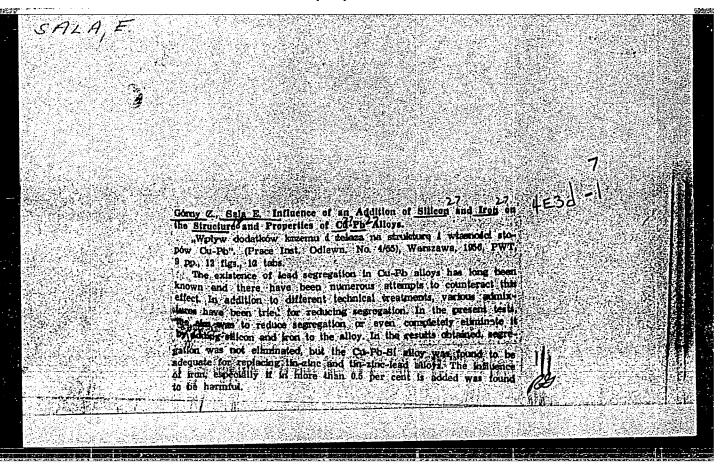
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Card 3/3



P/044/61/000/007/001/001 D002/D101

AUTHORS:

Burakowski, T., Master Engineer, and Sala, A., Master

Engineer

TITLE:

Flight booster rockets

PERIODICAL: Wojskowy przegląd lotniczy, no. 7, 1961, 22-36

TEXT: The informative article comprises chapters on the uses of additional thrust systems in contemporary military aircraft, conventional methods of producing additional thrust in flight, design and efficiency of flight booster rockets, and a comparison of assisted take-off and flight booster rockets. Apart from western examples of appropriate equipment, Soviet WW II booster rockets "RD-1" and "RD-1KhZ" are mentioned. There are 8 figures and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: Amstrong Siddeley "Snarler", Flight, no. 66, 6 Aug 1954, 176-180; D. Hurden, The development of the Amstrong Siddeley "Snarler" rocket motor, J. Brit. Interplanet. Soc., 14, Jul-Aug 1955, 215-229.

Card 1/1

BAHENSKY, Vladimir, inz.; SALA, Ivan, inz.

Regeneration of hardening salts containing barium chloride. Stroj vyr 12 no.6:432 Je 164.

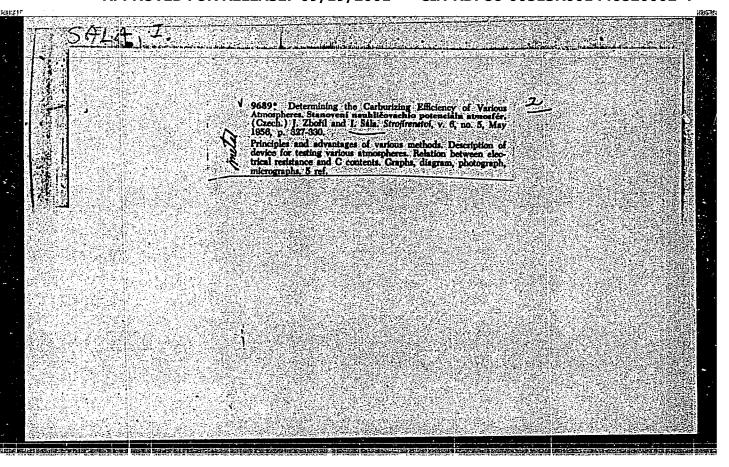
1. State Research Institute of Material Freservation, Prague.

SALA, I. - Vol. 3, no. 2, Feb. 1955. STROJIRENSKA VYROBA

Have you a correct temperature in furnaces? p. 68.

SO: Monthly list of Bast European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955.
Uncl.

	ALA, I. For Avoiding	g J _{amage} Stemming Engineering), #3:	from Overload of 143:Mar. 55	Protective Relays.	(Energetics
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S/123/62/000/017/003/006 A052/A101

AUTHOR:

Šála, Ivan

TITLE:

The medium for the austenization heating of high-carbon steels

without decarbonization

PERIODICAL:

Referativnyy zhurnal, Mashinostroyeniye, no. 17, 1962, 19, abstract 17B101 ("Materiál. sb. 1960. Čast 1." Státní výzkumný ústav materiálu a technol. Praha, 1960, 83 - 95, Czech; summaries in

Russian and English)

TEXT: The results of selecting the bath composition for heating for hardening 19421 tool steel $(1.13-1.26\%\ C,\ 1.02-1.11\%\ Cr,\ 0.14-0.12\%\ V)$ and 19422 tool steel $(1.35-1.47\%\ C,\ 1.61-1.63\%\ Cr,\ 0.17-0.16\%\ V)$ are described. The degree of decarbonization was determined by the layer chemical analysis. The application of a lead bath or of a bath consisting of 94% Al and 6% Si for heating steel to 840°C did not give any positive results, since the samples were subjected to decarbonization and oxidation. The heating in salt baths (NaCl, KCl and BaCl₂) also resulted in decarbonization of steel due to presence of various

Card 1/2

S/123/62/000/017/003/006 A052/A101

The medium for the austenization heating...

oxides in salts. A bath composed of chlorides with an addition of 8% NaCN lead to decarbonization already at short heatings. Similar results were achieved at heating in a bath containing 42% NaCl, 52% KCl and 6% dicyanodiamide. Attempts were made to use for heating baths containing SiC as a reducer. The decarbonization could not be prevented when using a bath containing 15% BaCl₂, 30% NaCl, 30% KCl, 20% Na₂CO₃ and 5% SiC. An increase of SiC content to 20% decreased the degree of decarbonization but did not prevent it. Positive results were reached in a bath containing 40% BaCl₂, 30% NaCl and 30% KCl. As a reducer 5% Si was added to the bath. In such a bath an hour's heating at 840°C did not cause any changes in the surface of the samples. After a 2 hours' heating a ferrite layer 0.01 mm deep formed on the surface. A positive effect of Si was evident already at its content of 0.25%.

M. Shapiro

[Abstracter's note: Complete translation]

Card 2/2

Z/032/60/010/012/009/009 E073/E335

AUTHOR:

Sála, I., Engineer

TITLE:

Application of Controlled Atmospheres in Engineering

Works

PERIODICAL:

Strojírenství, 1960, Vol. 10, No. 12,

pp. 950 - 952

TEXT: This is basically a summary of foreign practice. Equipment for developing exothermic developers of protective atmospheres are manufactured in Czechoslovakia in several sizes, mainly for use in continuous furnaces. Attention is drawn to the necessity of manufacturing equipment for exothermic generation of atmospheres with a high nitrogen content; such an atmosphere has a low CO content, is almost non-poisonous, it does not burn and there is no danger of explosion. It contains very few reactive components so that it has/practically neutral behaviour. Equipment for endothermic evolution of protective atmospheres is at present in the process of development in Czechoslovakia. There is only a single Czech-produced installation in operation.

Card 1/3

Z/032/60/010/012/009/009 E073/E335

Application of Controlled Atmospheres in Engineering Works [Abstractor's note: this is what is stated in the conclusions. However, in the body of the text it is stated that only a single endothermic generator is installed in Czechoslovakia and this is of foreign manufacture - Birlec, Great Britain.] The necessity is emphasised of making available to the Czech industry a sufficient quantity of such equipment for generating protective atmospheres, particularly, two-chamber equipment which is more reliable in service. For seriesmanufacture of components, continuous furnaces are the most economical and it is advisable that these should have a pre-chamber on the charging side. In view of the possible availability of natural gas, the author believes that furnaces should be designed which are gas-fired and the heat transmitted by means of radiation tubes. There is a lack of furnace space in Czechoslovakia for annealing austenitic steels with a gas-tight retort which can be operated with

Card 2/3

z/032/60/010/012/009/009 E073/E335

Application of Controlled Atmospheres in Engineering Works

a high-quality atmosphere produced by decomposing ammonia.

There are 2 figures and 8 non-Czech references.

ASSOCIATION: SVUMT, Prague

Card 3/3

Z/032/61/011/002/012/013 E073/E335

AUTHOR: Sala, I.

TITLE: Investigation of Layers with a High Resistance to Seizing Produced by Sulphonitriding in Salt Baths

PERIODICAL: Strojírenství, 1961, Vol. 11, No. 2, p. 154

TEXT: The report is devoted to sulphonitriding in the temperature range 280 to 380°C. Main attention is paid to the layers produced in a bath with temperatures of about 380°C. These newly proposed types of bath produce layers with considerably better friction properties than those which can be obtained with known baths. It was found that media operating in the temperature range 200 to 400°C do not present any metallurgical or technological advantage.

1960, Prague: SVÚMT Z-60-839.

(Note: this is a complete translation)

Card 1/1

S/123/62/000/014/016/020 A004/A101

AUTHORS:

Hák, Jiří, Šála, Ivan, Esterka, Bohumír, Pokorný, František

Activation and cleaning of the surface of alloyed steel prior to

TITLE:

nitriding.

PERIODICAL:

Referativnyy zhurnal, Mashinostroyeniye, no. 14, 1962, 37, abstract 14B225P (Czechoslovakian patent, class 48d, 5, 18c, 3/25,

No. 97555, 15.12.60)

A method of cleaning and activating the surface of parts prior to nitriding is patented, which improves the nitriding process and the quality of the layer obtained on chrome-nickel austenitic (or any other alloyed) steel. The method consists of applying to the steel surface to be nitrided a thin hydride layer of any metal (titanium, zirconium, tungsten, chromium, etc.) or a mixture of metal hydrides and ammonium chlorate or carbonate in the form of a suspension in methanol. In heating the surface during the nitriding process, it is cleaned from oxides, activated and the process of atomic nitrogen saturation is facilitated and accelerated. Nitriding is taking place as usual by heating the part in an atmosphere containing atomic nitrogen. After 10 hours nitriding (including the prepara-

Card 1/2

Activation and cleaning of		S/ 123/62/000/014/016/020 A004/A101
tion according to the patented m of HV 850 - 950.	method) the surface	hardness attains magnitudes
고 있었다. 그런	(東京新聞) (1987年) - 改造的特 (400年) (2018年) - 東京の会会 (2018年) - 大会の会	B. Yakovlev
[Abstracter's note: Complete tra	unslation]	
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보고 : 이 이 나는 무슨 음악을 하는 것을 같다. 당면이 된 이 등로 하는 것이 들어 들어 있습니다. 오늘 이 글로 보았다. 등로 보는 것이 되었습니다.		
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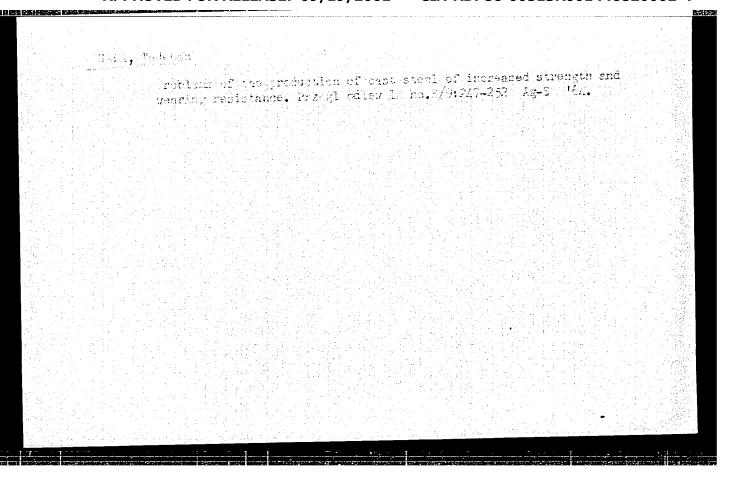
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SAIA, Tadeusz, mgr., inz.; KLUSKA, S., mgr., inz.; SEKOWSKI, Kasimierz, mgr., inz.

From the activities of the Foundry Institute. Przegl odlew 11 no.10:17-20 Biul Inform '61.

SALA	A, Tedeusz, mgr., inz.; ULMAN, Zbigniew, inz.
	An example of replacing steel by wear resistant cast iron. Przegl odlew 11 no.12:365-367 '61.
	으면 COUNTRY (INC.) 이 전에 발표한 경험 등을 보면 되는 것이 되는 것이 되는 것이 되는 것이 되었다. 그리고 있다는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것 이 사용 등을 하는 것이 되었다. 그런 것이 되었다면 하는 것이 되었다면 하는 것이 되었다. 그런 것이 되었다면 하는 것이 되었다면 하는데 되었다면 하는데 되었다면 하는데 되었다면 되었다면 하는데 되었다면 되었다면 하는데 되었다면 되었다면 되었다면 하는데 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면 되었다면

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존하인의 남인 시민화학 글로를 일었다면 되고 하지만 다	
나는 그 나는 사람들이 얼마나 되었다.	어느 계획 등록 시민들은 가수 보고 그를 보고 있는데
인터로 열할 경기를 발표되는 것이 없었다고?	나라 사일 하면 없을 때 그림을 했다.
	한 일본 12 등을 하는 사람이 되었다.
경고 하는데 가능을 하는데 그 그 그리고 하는데 되었다.	장의 관리를 하는 사람들의 회사를 하고 하다 하는
	요하는 항상 하면 가지나 하는 어때는 음식이라고
나 보는 사람들 하다면 걸려면 가게 그리고 있다.	불러방 병원 사용 그렇게 하는데
[[[진동으로 발표하다는 동문(동문이스 #트리	[일본] 경영 : 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
원래, 불통하면 생활되는 생활 회원을 가능하는	
	클레크 그리네요 아내는 것 같습니다.

SAIABANOV, Mikhail Dmitriyevich; DEMINA, V.N., redaktor; CHUVANOV, M.I., tekhnicheskiy redaktor

[Tables for the calculation of wages paid by the hour, day, and week]
Tablitsy rascheta zarabotnoi platy; pri povremennoi sisteme oplaty
truda. Izd. 7-e, perer. Moskva, 1956. 30 p.
(Wages-Tables and ready-reckoners)